

SEQUENCE LISTING

<110> Friddle, Carl Johan
Aylor, Erin
Scoville, John
Walke, D. Wade

<120> Novel Human Secreted Signal Proteins and Polynucleotides Encoding the Same

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<150> US 60/216,384

<151> 2000-07-07

<150> US 60/219,890

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<151> 2000-09-06

<160> 24

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ttccgcggcc	gccggtggaa	ctgcaccacc	gtccacgaca	gcctggccat	cttcggggcc	300
gtgctggaca	aagctaccag	ggagtcggcc	tttgtccacg	ccattgcctc	agccgggtgtg	360
gcctttgcag	tgacacgctc	atgtgcagaa	ggcacggccg	ccatctgtgg	ctgcagcagc	420
cgccaccagg	gctcaccagg	caagggctgg	aagtgggggtg	gctgtagcga	ggacatcgag	480
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Val Pro Lys Gln Leu Arg Phe Cys Arg Asn Tyr Val Glu Ile Met Pro
50 55 60
Ser Val Ala Glu Gly Ile Lys Ile Gly Ile Gln Glu Cys Gln His Gln
65 70 75 80
Phe Arg Gly Arg Arg Trp Asn Cys Thr Thr Val His Asp Ser Leu Ala
85 90 95
Ile Phe Gly Pro Val Leu Asp Lys Ala Thr Arg Glu Ser Ala Phe Val
100 105 110
His Ala Ile Ala Ser Ala Gly Val Ala Phe Ala Val Thr Arg Ser Cys
115 120 125
Ala Glu Gly Thr Ala Ala Ile Cys Gly Cys Ser Ser Arg His Gln Gly
130 135 140
Ser Pro Gly Lys Gly Trp Lys Trp Gly Gly Cys Ser Glu Asp Ile Glu
145 150 155 160
Phe Gly Gly Met Val Ser Arg Glu Phe Ala Asp Ala Arg Glu Asn Arg

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Arg	Ala	Ile	Gly	Asp	Phe	Leu	Lys	Asp	Lys	Tyr	Asp	Ser	Ala	Ser	Glu				
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Arg	Pro	Arg	Tyr	Thr	Tyr	Phe	Lys	Val	Pro	Thr	Glu	Arg	Asp	Leu	Val				
			260					265					270						
Tyr	Tyr	Glu	Ala	Ser	Pro	Asn	Phe	Cys	Glu	Pro	Asn	Pro	Glu	Thr	Gly				
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Ser	Phe	Gly	Thr	Arg	Asp	Arg	Thr	Cys	Asn	Val	Ser	Ser	His	Gly	Ile				
	290					295				300									
Asp	Gly	Cys	Asp	Leu	Leu	Cys	Cys	Gly	Arg	Gly	His	Asn	Ala	Arg	Ala				
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Glu	Arg	Arg	Arg	Glu	Lys	Cys	Arg	Cys	Val	Phe	His	Trp	Cys	Cys	Tyr				
				325					330					335					
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<213> homo sapiens

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cccgggagaa	ccggccagat	gcccgtcag	ccatgaaccg	ccacaacaac	gaggctgggc	720
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 85 90 95
 Arg Ser Ala Thr Arg Glu Thr Ser Phe Ile His Ala Ile Ser Ser Ala
 100 105 110
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 115 120 125
 Asn Cys Gly Cys Asp Gly Ser Asn Asn Gly Lys Thr Gly Gly His Gly
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 Trp Ile Trp Gly Gly Cys Ser Asp Asn Val Glu Phe Gly Glu Arg Ile
 145 150 155 160
 Ser Lys Leu Phe Val Asp Ser Leu Glu Lys Gly Lys Asp Ala Arg Ala
 165 170 175
 Leu Met Asn Leu His Asn Asn Arg Ala Gly Arg Leu Ala Val Arg Ala
 180 185 190

Thr Met Lys Arg Thr Cys Lys Cys His Gly Ile Ser Gly Ser Cys Ser
 195 200 205
 Ile Gln Thr Cys Trp Leu Gln Leu Ala Glu Phe Arg Glu Met Gly Asp
 210 215 220
 Tyr Leu Lys Ala Lys Tyr Asp Gln Ala Leu Lys Ile Glu Met Asp Lys
 225 230 235 240
 Arg Gln Leu Arg Ala Gly Asn Ser Ala Glu Gly His Trp Val Pro Ala
 245 250 255
 Glu Ala Phe Leu Pro Ser Ala Glu Ala Glu Leu Ile Phe Leu Glu Glu
 260 265 270
 Ser Pro Asp Tyr Cys Thr Cys Asn Ser Ser Leu Gly Ile Tyr Gly Thr
 275 280 285
 Glu Gly Arg Glu Cys Leu Gln Asn Ser His Asn Thr Ser Arg Trp Glu
 290 295 300
 Arg Arg Ser Cys Gly Arg Leu Cys Thr Glu Cys Gly Leu Gln Val Glu
 305 310 315 320
 Glu Arg Lys Thr Glu Val Ile Ser Ser Cys Asn Cys Lys Phe Gln Trp
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			20					25					30		
Pro	Lys	Ala	Tyr	Leu	Thr	Tyr	Thr	Ser	Val	Ala	Leu	Gly	Ala	Gln	
		35					40					45			
Ser	Gly	Ile	Glu	Glu	Cys	Lys	Phe	Gln	Phe	Ala	Trp	Glu	Arg	Trp	Asn
	50					55					60				
Cys	Pro	Glu	Asn	Ala	Leu	Gln	Leu	Ser	Thr	His	Asn	Arg	Leu	Arg	Ser
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Ala	Thr	Arg	Glu	Thr	Ser	Phe	Ile	His	Ala	Ile	Ser	Ser	Ala	Gly	Val
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Met	Tyr	Ile	Ile	Thr	Lys	Asn	Cys	Ser	Met	Gly	Asp	Phe	Glu	Asn	Cys
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Trp	Gly	Gly	Cys	Ser	Asp	Asn	Val	Glu	Phe	Gly	Glu	Arg	Ile	Ser	Lys
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Leu	Phe	Val	Asp	Ser	Leu	Glu	Lys	Gly	Lys	Asp	Ala	Arg	Ala	Leu	Met
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Asn	Leu	His	Asn	Asn	Arg	Ala	Gly	Arg	Leu	Ala	Val	Arg	Ala	Thr	Met
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Lys	Arg	Thr	Cys	Lys	Cys	His	Gly	Ile	Ser	Gly	Ser	Cys	Ser	Ile	Gln
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225					230					235					240
Phe	Leu	Pro	Ser	Ala	Glu	Ala	Glu	Leu	Ile	Phe	Leu	Glu	Glu	Ser	Pro
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Asp	Tyr	Cys	Thr	Cys	Asn	Ser	Ser	Leu	Gly	Ile	Tyr	Gly	Thr	Glu	Gly
			260					265					270		
Arg	Glu	Cys	Leu	Gln	Asn	Ser	His	Asn	Thr	Ser	Arg	Trp	Glu	Arg	Arg
		275					280					285			
Ser	Cys	Gly	Arg	Leu	Cys	Thr	Glu	Cys	Gly	Leu	Gln	Val	Glu	Glu	Arg
	290					295					300				
Lys	Thr	Glu	Val	Ile	Ser	Ser	Cys	Asn	Cys	Lys	Phe	Gln	Trp	Cys	Cys
305					310					315					320
Thr	Val	Lys	Cys	Asp	Gln	Cys	Arg	His	Val	Val	Ser	Lys	Tyr	Tyr	Cys
			325						330					335	
Ala	Arg	Ser	Pro	Gly	Ser	Ala	Gln	Ser	Leu	Gly	Lys	Gly	Ser	Ala	
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<212> DNA

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gaatttgggg	aaaggatctc	caaactcttt	gtggacagtt	tggagaaggg	gaaggatgcc	180
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cagctggctg aattccggga gatgggagac tacctaaagg ccaagtatga ccaggcgctg 360
 aaaattgaaa tggataagcg gcagctgaga gctgggaaca gcgccgaggg ccaactgggtg 420
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 cagaacagcc acaacacatc caggtgggag cgacgtagct gtgggcgcct gtgcactgag 600
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<210> 11
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 <213> homo sapiens

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 20 25 30
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 35 40 45
 Leu Phe Val Asp Ser Leu Glu Lys Gly Lys Asp Ala Arg Ala Leu Met
 50 55 60
 Asn Leu His Asn Asn Arg Ala Gly Arg Leu Ala Val Arg Ala Thr Met
 65 70 75 80
 Lys Arg Thr Cys Lys Cys His Gly Ile Ser Gly Ser Cys Ser Ile Gln
 85 90 95
 Thr Cys Trp Leu Gln Leu Ala Glu Phe Arg Glu Met Gly Asp Tyr Leu
 100 105 110
 Lys Ala Lys Tyr Asp Gln Ala Leu Lys Ile Glu Met Asp Lys Arg Gln
 115 120 125
 Leu Arg Ala Gly Asn Ser Ala Glu Gly His Trp Val Pro Ala Glu Ala
 130 135 140
 Phe Leu Pro Ser Ala Glu Ala Glu Leu Ile Phe Leu Glu Glu Ser Pro
 145 150 155 160
 Asp Tyr Cys Thr Cys Asn Ser Ser Leu Gly Ile Tyr Gly Thr Glu Gly
 165 170 175
 Arg Glu Cys Leu Gln Asn Ser His Asn Thr Ser Arg Trp Glu Arg Arg
 180 185 190
 Ser Cys Gly Arg Leu Cys Thr Glu Cys Gly Leu Gln Val Glu Glu Arg
 195 200 205
 Lys Thr Glu Val Ile Ser Ser Cys Asn Cys Lys Phe Gln Trp Cys Cys
 210 215 220
 Thr Val Lys Cys Asp Gln Cys Arg His Val Val Ser Lys Tyr Tyr Cys
 225 230 235 240
 Ala Arg Ser Pro Gly Ser Ala Gln Ser Leu Gly Lys Gly Ser Ala
 245 250 255

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Figure 1 consists of 10 histograms arranged vertically, labeled $k=0$ through $k=9$. Each histogram shows the frequency of the number of non-zero elements in the rows of the matrix A_k . The x-axis for all histograms ranges from 0 to 100, and the y-axis ranges from 0 to 10. The distributions are as follows:

- $k=0$: A single peak at 50 with a frequency of 10.
- $k=1$: A peak at 50 with a frequency of 10, and a smaller peak at 100 with a frequency of 1.
- $k=2$: A peak at 50 with a frequency of 10, and a smaller peak at 0 with a frequency of 1.
- $k=3$: A peak at 60 with a frequency of 10, and a smaller peak at 100 with a frequency of 1.
- $k=4$: A peak at 40 with a frequency of 10, and a smaller peak at 0 with a frequency of 1.
- $k=5$: A peak at 70 with a frequency of 10, and a smaller peak at 100 with a frequency of 1.
- $k=6$: A peak at 30 with a frequency of 10, and a smaller peak at 0 with a frequency of 1.
- $k=7$: A peak at 80 with a frequency of 10, and a smaller peak at 100 with a frequency of 1.
- $k=8$: A peak at 20 with a frequency of 10, and a smaller peak at 0 with a frequency of 1.
- $k=9$: A peak at 90 with a frequency of 10, and a smaller peak at 100 with a frequency of 1.

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<210> 14
<211> 72
<212> DNA
<213> homo sapiens
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<210> 15
<211> 23
<212> PRT
<213> homo sapiens
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<210> 16
<211> 111
<212> DNA
<213> homo sapiens
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<211> 36
<212> PRT
<213> homo sapiens
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<210> 18

<211> 1056
 <212> DNA
 <213> homo sapiens

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 <211> 351
 <212> PRT
 <213> homo sapiens

<400> 19
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 20 25 30
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 35 40 45
 Ser Gly Ile Glu Glu Cys Lys Phe Gln Phe Ala Trp Glu Arg Trp Asn
 50 55 60
 Cys Pro Glu Asn Ala Leu Gln Leu Ser Thr His Asn Arg Leu Arg Ser
 65 70 75 80
 Ala Thr Arg Glu Thr Ser Phe Ile His Ala Ile Ser Ser Ala Gly Val
 85 90 95
 Met Tyr Ile Ile Thr Lys Asn Cys Ser Met Gly Asp Phe Glu Asn Cys
 100 105 110
 Gly Cys Asp Gly Ser Asn Asn Gly Lys Thr Gly Gly His Gly Trp Ile
 115 120 125
 Trp Gly Gly Cys Ser Asp Asn Val Glu Phe Gly Glu Arg Ile Ser Lys
 130 135 140
 Leu Phe Val Asp Ser Leu Glu Lys Gly Lys Asp Ala Arg Ala Leu Met
 145 150 155 160
 Asn Leu His Asn Asn Arg Ala Gly Arg Leu Ala Val Arg Ala Thr Met
 165 170 175
 Lys Arg Thr Cys Lys Cys His Gly Ile Ser Gly Ser Cys Ser Ile Gln
 180 185 190
 Thr Cys Trp Leu Gln Leu Ala Glu Phe Arg Glu Met Gly Asp Tyr Leu
 195 200 205

Lys Ala Lys Tyr Asp Gln Ala Leu Lys Ile Glu Met Asp Lys Arg Gln
 210 215 220
 Leu Arg Ala Gly Asn Ser Ala Glu Gly His Trp Val Pro Ala Glu Ala
 225 230 235 240
 Phe Leu Pro Ser Ala Glu Ala Glu Leu Ile Phe Leu Glu Glu Ser Pro
 245 250 255
 Asp Tyr Cys Thr Cys Asn Ser Ser Leu Gly Ile Tyr Gly Thr Glu Gly
 260 265 270
 Arg Glu Cys Leu Gln Asn Ser His Asn Thr Ser Arg Trp Glu Arg Arg
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 Ser Cys Gly Arg Leu Cys Thr Glu Cys Gly Leu Gln Val Glu Glu Arg
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 Lys Thr Glu Val Ile Ser Ser Cys Asn Cys Lys Phe Gln Trp Cys Cys
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 <211> 105
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<210> 21
 <211> 34
 <212> PRT
 <213> homo sapiens

<400> 21
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<210> 22
 <211> 111
 <212> DNA
 <213> homo sapiens

<400> 22
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<210> 23
 <211> 36
 <212> PRT
 <213> homo sapiens

<400> 23

Met Gly His Leu Val Leu His Gly His Pro Gly Thr Leu Gln Val Glu
 1 5 10 15
 Gly Val Phe Gly Ser Thr Arg Ser Val Asn Asn Phe Leu Ile Thr Gly
 20 25 30
 Pro Lys Val Gly
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<210> 24
 <211> 2257
 <212> DNA
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